Radio-Learning: A new tendency of web radio

Marcelo Mendonça, TEIXEIRA

Universidade do Minho
Doctoral Student in Educational Technology
marcelo.uminho.pt@gmail.com

Bento Duarte, SILVA

Universidade do Minho
Associate Teacher Doctor
bento@iep.uminho.pt

Abstract

The present educational-communicative paradigm requires a new way of thought about the pedagogic models and new intervention strategies in society, which are able to respond to contemporary educational and intervenient processes. In this sense, the radio has been a great ally for Education for over one hundred and fifty years, taking the information and knowledge to the most inhospitable places. Nowadays, with a web format, the radio makes available, in virtual space, an ample group of technological interfaces with an alternative and complementary environment of teaching-learning. Appears, therefore, learning through the Internet radio - the Radio-learning, providing the virtual space and a set of interfaces for technology that teachers can disseminate their scientific work, suggest readings, stimulate debate on issues related to discipline (forums discussion), information notes, reviews, interviews with local experts and invited, promotion of academic events (congresses, seminars, lectures, conferences or meetings), lessons in podcast, beyond the possibility of synchronous communication with the network, through email, blog, messenger, chat, myspace and others. In this communication, we will make a reflection about the web radio and the concept of radio-learning, showing its present panorama as an educational-communicative media and highlighting the case study of the Rádio Universitária do Minho.

1. Introduction

The possibilities of information and communication with the evolution of the media on the Internet changed our way of thought, act, work, relate, teach, and learn, that is, our whole life in society (Sampaio, 2008). In other words, it is what Castells (2002) denominates "Network Society".

This new communicational and social order is presented through the cyber culture, which inter-relates information, communication and technology generated by the inter-connection of computers, on which a communication destitute of corporeal presence is consolidated (Roesler, 2007). Arises, then, the culture of networks, appearing contemporarily as a metaphor to translate the sense of the interaction, communicability and sociability experiences of people with the virtual word (Paiva, 2004).

To Lévy (1994), the World Wide Web universe favors a collective intelligence on the educative domain and cooperative learning, producing a cyberculture on the information society. Castells (2002:463-464) adds to that, asserting that "the web allowed interest groups and network projects to overcome time-costs problems associated to the chaotic pre-www information, as, in this basis, groups, individuals and organizations could interact significantly with what has become, literally, a wide world web of interactive and individualized communication", reinforcing the formation of virtual learning communities in education.

The "Web" not only amplifies the formation of social communication fields as a "media", but is capable of creating new cultural and social constructions, acquiring its own life in cyberspace (Maccormack & Jones, 1998; Bochmann, 1995). Thence, a new social conscience is created, which will be used by an information society, at local and global levels, crossing both communication contexts, constituting a global network (Tapscott & Williams, 2008).

On the educational field, the cyberspace has enabled the development of virtual learning environments, focused on the utilization of interaction software and the Internet itself as a pedagogic interface potentially capable of decreasing geographical distances and increasing interaction between student and instructor pairs, above all those who act on the distance education modality (Palloff & Pratt, 2000; Lévy, 1997).

In this sense, the radio found on the Internet the possibility to acquire another temporality, when it makes available multimedia files, asynchronous transmission, flexibility, and then, straiten the relationship between listener/user. According to Alves (2003), within the new digital environment new patterns of communication and activities appear. According to the author, the cyberspace connects users and institutions, making available to both a great range of opportunities and services. Then, discussion lists, chats, video-conferences, audio-conferences, podcasts emerge, which now merge to the radio for the offer of content and participation of the audience on the web program.

In this communication, we will make a reflection on the web radio, presenting its present panorama as an educational-communicative media and highlighting the case study of the Rádio Universitária do Minho (RUM), and present the concept of radio-learning as the new tendency of web radio.

2. Methodology Adopted in the Investigation

The investigation from which this communication originated considered important to analyze the educational potentialities of the web radio, more specifically on the Portuguese Undergraduate courses, being described in more detail on the Rádio Universitária do Minho case study.

Investigations through case studies contemplate multiple sources of evidence and different techniques of field research, which could involve the observation of the phenomenon during its occurrence, studies and document analysis, interviews, measurements and qualitative and quantitative surveys inherent to the case (Yin, 2003; Stake, 1995; Bassey, 1999; Punch, 1998; Merriam, 1998; Fabrício, 2000).

In the present investigation, we used, as techniques and instruments for data collection: information survey on the web; document analysis (through the technique of content analysis – program grids); the observation of Portuguese university radio programs, and the analysis of the formative tendency of RUM (including semi-structured interviews to the radio's director).

We also used the classification of radio-phonic categories from Filho (2003), which could be categorized in: *Journalistic* (note, news, bulletin, reporting, interview, comment, editorial, chronicle, journalistic documentary, round-tables or debates, police program, sportive and techno-scientific programs); *Educative-Cultural* (autobiography, educative-cultural documentary, thematic program); *Entertainment* (musical program, fictional program and artistic event); *Publicity* (spot, jingle, testimonial, promotion piece); *Advertising* (public action radio-phonic piece, electoral and religious programs); *Service* (notes of public utility and service); *Special* (children's program, varieties program).

3. Results on the Web Radio

With regards to the mass media that develop social-cultural activities of formal and informal education, it almost always includes formal programs, being directly focused to the school curriculum (Trilla, 1998). It is the case of the various university radios on the web of informative character, but with a strong formative tendency, establishing mixed educational-communicative configurations. Perona & Veloso (2007:18) establish a typology for radios with cultural and educative tendency – community, popular, formative, municipal, scholar and university – asserting, quoting Merayo (2000), that "Even though, all seem to share a common line: they attempt to reach non-commercial objectives and are guided especially and directly to a social character purpose".

According to Correia & Tomé (2007), the informal and non-formal contexts provide a great source of knowledge, always constituting an important source of innovation and stimulus to the search for knowledge, through methods and techniques that deviate from the traditional means of educational formation. As education and communication are indissoluble concepts, the institutions are intensively using the technological resources, aiming at the transformation of information in knowledge, now more than ever, in virtual educational environments (Lévy, 1990).

With the online emission, the radio developed another language, through the incorporation of new elements to its discursive structure, and through the way the listener/user takes a pro-active attitude of investigation and use of contents. In parallel, the scheme of emission and reception had to follow this evolution, favoring the fragmentation of audiences in function of their specific interests (Cordeiro, 2005; Leão, 2007). This way, the educational-communicative potentialities of the web radio started to be found by lecturers, school managers, educational institutions and university radios, based on successful experiences with the use of the interface in different parts of the world.

Contrary to traditional radio, the radio through the Internet is not restricted to audio, neither imposes limits to geographical reach (Lee, 2005). Its transmission could come followed by images, videos, texts, pictures, and links or through message boxes and chats (Priestman, 2002). This advance allows the listener to do much more than just listen, making communication much more dynamic. Today, it is possible to conduct an online formation, offering didactic material in PDF files or Word document, video, podcast, and have access to up-to-date information through the RSS feed, clear doubts with the instructor / educator through messenger, e-mail, chat, forums, besides the interactivity in real time, through audio-conference or video-conference.

Based on a cooperative work, with interactivity among the participants and sharing of ideas, the interface “web radio” is presented as a mean through which the students feel an important and active part of the educational-communicative process. “This takes us to a proposal of rupture from the traditional educational model based on a linear transmission of discipline content, in which emission and reception are separate” (Fernandes & Silva, 2004:379).

4. The concept of Radio-Learning

The concept of Radio-Learning or R-Learning follows from social, educative and formative characteristics of the radio on the Internet, as an object of learning. It is about the combination of various elements common to the web radio: the ubiquity (accessible everywhere) – the flexibility – the low cost of production and program broadcasting – the emission in real time (integral) – the synchronous communication (communication intermediated by computers in a simultaneous way) – the multi-directed connectivity – the multimedia sharing – the streaming (listen/see directly from the Internet) – the collaboration (exchange of information in cyberspace) – and the interactivity, integrated to e-learning (system of learning on the Internet).

According to Silva (2001:130): “The new technological supports brought the facility of access to information, namely by the increase of storage capacity, by the processing speed and by the compatibility between the systems”.

The schools through a web radio can provide educational programs with different themes for different courses and disciplines, which will be available online and can be accessed at anytime and anywhere in the world. Through this technological resource, there is no possibility of losing the program if the person is busy, the programs are available online and can be accessed when necessary or possible (Suanno, 2003). This model of educational web radio is what we call **Radio-Learning**, actually expanding in many parts of the world.

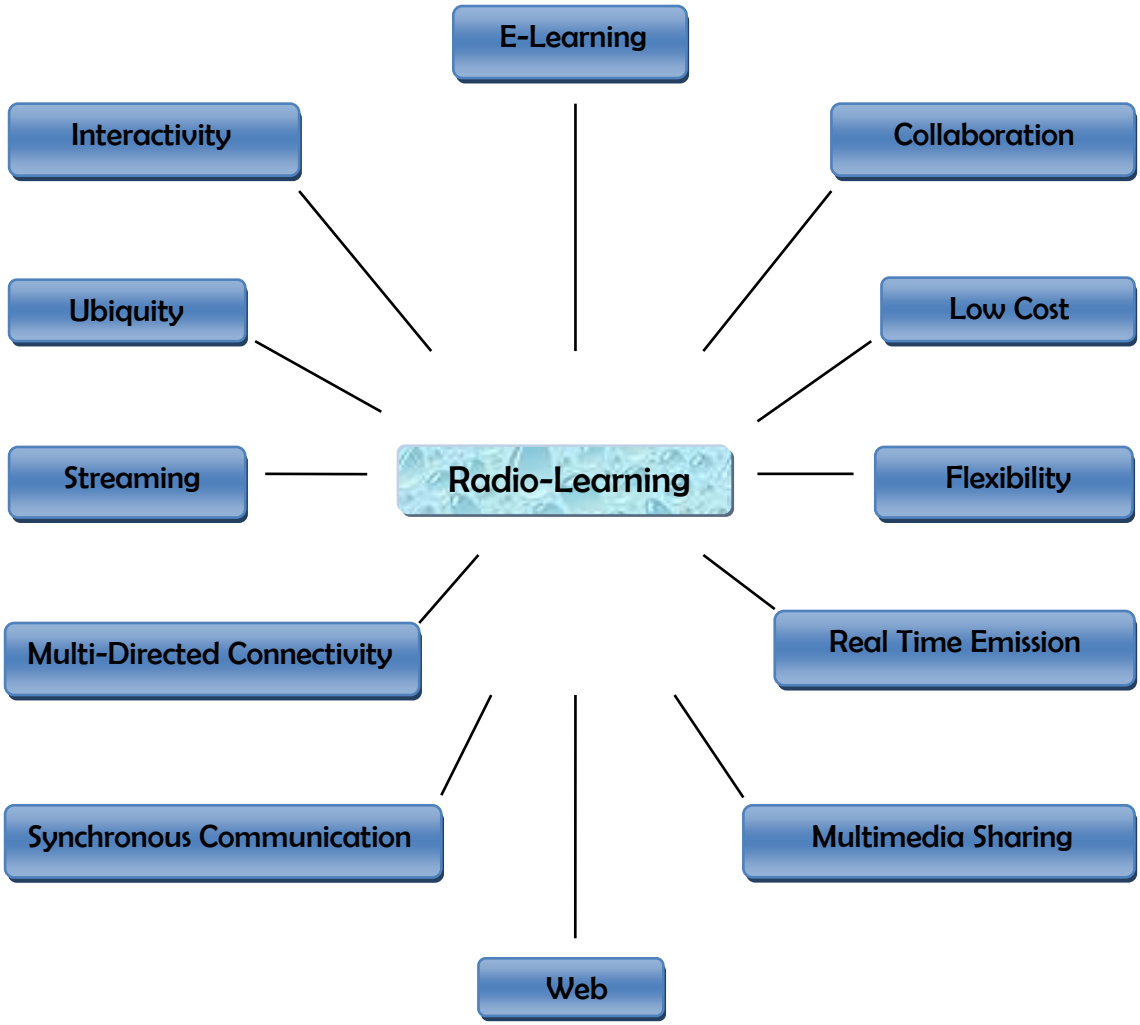

Fig.2 – Elements of Radio-Learning

5. The Experiences of University Radios in Portugal

In Portugal, contrary to in other European countries, the university radios on the web appeared at the end of the 90's, and today, after almost two decades, few remain active in the national scenario.

The radio researcher Paula Cordeiro, says that, in Portugal, in 2005, there were four university radios with FM emission and few projects of university radios in the web (Cordeiro, 2005). Leão (2007) also shares the same information, identifying the *Rádio Universitária de Coimbra* (www.ruc.pt) – from Universidade de Coimbra; the *Rádio Universitária do Marão* (www.universidade.fm) – from the Trás-os-Montes and Alto Douro Region; the *Rádio Universitária do Algarve* (www.rua.pt) – from the Universidade do Algarve; and the *Rádio Universitária do Minho* (www.rum.pt) – from the Universidade do Minho, as the portuguese university web radios.

Besides these, from the research performed for this work, we have identified the presence of other two university radios – the *Rádio Universitária Beira do Interior* (www.rubi.ubi.pt) – from the Universidade Beira do Interior, and the *Radio Zero* – from the Instituto Superior Técnico (www.radiozero.pt). In global terms, it is possible to assert that they share similar objectives, but have different and heterogeneous structures and program typologies (Cordeiro, 2005). However, among the mentioned radios, the *Rádio Universitária do Minho* stands out presently for its diverse and segmented program on the web, dedicated to the promotion and divulgation of cultural, scientific and support activities to the lectures of the Universidade do Minho, representing, at the same time, some of its departments and academic unities, besides a strong cultural intervention in the local communities of the Braga and Porto Districts.

The Rádio Universitária de Coimbra (RUC) exists since 1986 and was one of the first university radios in Portugal with web emission. Nowadays, it develops its activities based on the following categories: the formative, the informative, the academic and the cultural-educative. The formative category is established through periodic courses of formation and recycling for speakers, editors/speakers and technicians, besides the realization of didactic programs in collaboration with public and private institutions. The informative category is a space focused on the debate of questions related to the Universidade de Coimbra and to up-to-date news. About the academic life at the Universidade de Coimbra, the RUC dedicates an ample space in its program grid, transmitting the main occurrences of the learning institution. Finally, the cultural category is responsible for the divulging of various cultural activities going on in Coimbra, at the North Region or in the rest of the country, with programs dedicated to music, theater, cinema, poetry, literature and the transmission of concerts, shows and popular festivals.

The Rádio Universidade do Marão (FM Universidade) gave its first steps in the virtual world in 2000 (Cordeiro 2005), and since then the objective of the broadcasting station was to become the first university radio totally digital in Portugal. However, for technical reasons, this evolution to the web was only firmed in posterior years (Leão,

2007). Presently, the Rádio Universidade do Marão is focused on the academic public of the Trás-os-Montes and Alto Douro Region, with a purely informative focus.

In 2003, the Rádio Universitária do Algarve (RUA) arouse in a partnership between the Academic Association and the Universidade do Algarve. In the web, it has as an objective to divulge and promote the academic activities and cultural and musical events of the South Region in Portugal. Different from "RUC" and "RUA", it is grounded in three pillars to develop its activities: the Academy, the Culture and Alternative Music. The objective of the programs directed to the Academy is to show to the national Portuguese community the contributions that the Universidade do Algarve offers to the region and to the country, related to teaching and research. The Culture is centered on the promotion and divulging of cultural events that take place in the Algarve Region (popular festivals, concerts, shows, cinema, literature, theater). The Alternative Music programs promote the work of artists and bands unknown to the public in general and to the communication means.

Still in 2003 the Rádio Universitária Beira do Interior (RUBI) was created as a laboratory of the discipline radio-phonic Journalism at the Universidade Beira do Interior, only with an internal character. In 2004, the RUBI starts to emit its radio-phonic program on the web, and started to be called "RUBIweb". But only in 2006 that the RUBI decided to bet on the diversity of categories in its program grid, aggregating multimedia interfaces to its web radio platform, such as the podcast and e-mail.

According to the Filho's (2003), radio-phonic classification of categories, Rádio Universitária Beira do Interior is exclusively generalist and informative, functioning as the "voice" of the Departments from the Universidade Beira do Interior, as well as of the local community, Covilhã.

The Radio Zero is part of the Association of the Instituto Superior Técnico (IST), with its headquarters in Lisbon (before 2006 it was called RIIST – Internal Radio of IST). Being originally a radio of university character, its objectives are centered in offering radio-phonic formation to the students interested in working in radio, as well as inform the "IST" academic community about the main events going on at the university, in a cultural, scientific and educative ambit (http://www.radiozero.pt/projecto/). It has more than 40 programs on its online program grid of journalistic, cultural-educative and entertainment character (in its majority).

The Rádio Universitária do Minho (RUM) exists since 1989, and since 2006 it started to transmit via web, with a clearly heterogeneous program offer, on which spaces of purely formative-instructive character are mixed with others that explore different categories and formats, closer to some ongoing experiences in Europe. According to Leão (2007), the RUM launched two crucial interfaces in the context of its strategy to conquer and gain the loyalty of new public: the website and the online emission. The consolidation of the online emission, particularly, revealed as an alternative to the "conventional receptors", emphasizing culture, debates on education, science, economy, politics, news, local informs, chronicles, interviews, and specialized reports.

In its relationship to the Universidade do Minho, the RUM makes available the virtual space and a group of technological interfaces for the lecturers to divulge their scientific

works, suggest readings, stimulate the debate on themes related to their disciplines (discussion forums), to inform grades, tests, interviews, divulge local, national and international academic events (congresses, seminars, talks, colloquiums, meetings…), store lectures in podcast (in a way that the student can have access to the discipline contents in any part of the world), besides the possibilities of synchronous communication with the broadcasting station, through e-mail, *blog*, messenger or *myspace*.

Besides, it is on the program grid that the RUM is most different from the other portuguese university radios, for its thematic diversity of the programs dedicated to the educative-cultural and journalistic categories: *Magazine da Educação* (Education Magazine) and the *Livros com RUM* (Books with RUM) – information and reflection on the Portuguese and international literary situation, with interview from critics, authors and specialists in literature; *Ciência para Todos* (Science for All) and the *Universidade Sem-Muros;* (No boundaries University) at the *Democracia Viva* (Living Democracy) – promotion and divulging of the university's cultural and scientific activities; *Praça Município/Café com Blogs* (Municipal Square/Coffee with Blogs) – debate about the Portuguese political scenario; *Campus Verbal* (serves as a radio-phonic laboratory, where the students from the Institute of Literature and Science of the Universidade do Minho, of French and German areas, produce radio programs based on what they have learned in the lecture rooms, and store the contents at the university's website in a podcast format; *Olhar no Feminino* (Look on the Female) – discusses themes related to the female world; *Rumo Económico* (Economic Route) – interviews and reports on the national and international economic panorama; *ECO RUM* – program focused on the protection and conservation of the environment; *Cultura Impressa* (Printed Culture) – the main topics of printed media are debated on the program; *Caixa de Ferramentas* (Tool Box) and the *Diferença em 1º Plano* (Difference in 1st Level) – debates and interviews and the promotion of specialized support services to attend the peculiarities of people with special needs; *Cultura Crónica* (Chronic Culture) – program focused on stage arts, cinema, literature and shows; and the *Escola de Rádio* (Radio School), where courses on the radio-phonic universe are developed (the courses are given by communication experts from the Rádio Universitária do Minho and lecturers of the Universidade do Minho.

According to (Geller, 2007:5):"If you can create quality programming, and consistently stick a host, program, or format over the time it takes to find its audience, you will likely have your own sucess story".

This is the case of Rádio Universitária do Minho, with more than 60 specialized programs, divided by categories, and for all public.

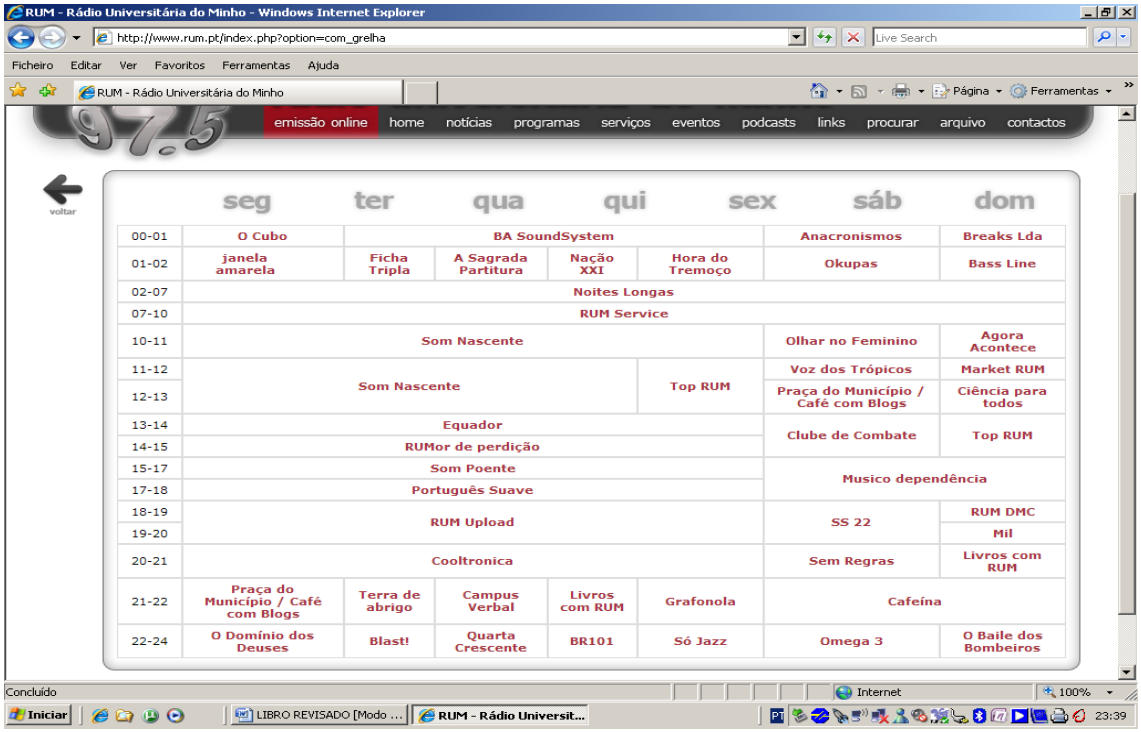

Fig. 2 – Program Grid of the RUM

It is this way that the university radios work in Portugal, functioning as a social communication vehicle of local communities and as a valuable space for the divulgation, socialization and popularization of science and technology, produced by different departments at the teaching institutions.

To Cordeiro (2005:10): “The contribution and influence of university radios in the development of the future professionals’ formation, allied to the importance in the context of radio-phonic communication in general are incontestable, and, in a context where the main concern is the profit-making of the station, university radios appear as elements that offer alternatives of program and formation”.

6. Final Considerations

According to the preliminary results of this investigation, the university radios are not restricted to generalist or informative functions anymore, but figure as a complementary or alternative mean for people's formation.

Such tendency is present in the objectives of the Rádio Universitária do Minho, through its social, cultural, educative and formative activities, both on conventional and web formats.

However, the understanding of the web radio as an educational-communicative media has been followed by some difficulties related to the international academic community, in face of the still restricted investigation about the potentialities of online radio. Besides that, due to the similarity of its basic characteristics, it is common for the student public to confound podcast with web radio.

Another question to be considered is the need to create its own identity as a means of mass communication on the web, once it comes from a traditional media format. Even though it is still in need of a solid methodological-theoretical basis, the use of the web radio as a formative interface has been expanding significantly in the world.

Despite the abovementioned obstacles, any course or discipline in school or at university, made available in a virtual learning environment, could use the radio-phonic program, or produce, in a local radio station, contents to be shared by the students. It is only question of believing in the potential of the radio on the Internet and its potentialities, to make the dream of Roquete Pinto (considered the father of broadcasting in Brazil) worth, transforming it definitively in an educational mean (Souza & Souza, 2007).

*Text produced under the individual program Doctor Foundation for Science and Technology of Portugal (FCT), integrated in the Center for Research in Education (CIED) - Universidade do Minho. Project: Information Society, Innovation and educational processes.

7. References

Alves, R. (2003) "*Rádio no ciberespaço – Intervenções, adaptação, mudança e transformação*", Proceedings of the XXVI Congresso Brasileiro de Ciências da Comunicação, 02-07 September 2003, Belo Horizonte, pp.1-12.

Bassey, M. (1999) "*Case study research in educational settings*", Buckingham, Open University.

Bochmann, E. (1995) "*The Electronic Classroom*", Medford, Learned Information.

Castells, M. (2002) "*A Sociedade em Rede*", Lisboa, Fundação Calouste Gulbenkian.

Cordeiro, P. (2005) "*Experiências de rádio produzidas para e por jovens: o panorama português das rádios universitárias*", Proceedings of the I Encuentro Iberoamericano de Radios Universitarias, 13-14 March 2005, Granada, pp.1-9.

Correia, C., Tomé, I. (2007) "*O que é e-learning*", Lisboa, Plátano Editora.

Fabrício, M. (2005) "*Metodologia de pesquisa em gestão do processo de projeto*", São Paulo, Universidade de São Paulo.

Fernandes, S., Silva, M. (2004). Criar e desenvolver uma rádio online na escola: Interatividade e cooperação no ambiente de aprendizagem, *Revista da FAEEBA – Educação e Contemporaneidade*, XIII (22), pp. 375-384.

Filho, A. (2003) "*Gêneros radiofónicos – Os formatos e os programas em áudio*", São Paulo, Paulinas.

Geller, V. (2007) "*Creating powerful radio: getting, keeping and growing audiences*", Burlington, Focal Press.

Lee, E. (2005) "*How internet radio change the world*", New York, iUniverse.

Leão, V. (2007) "*As rádios locais e o desenvolvimento territorial: as rádios universitárias*", Braga, seminar paper presented in the Departmento de Geografia, Universidade do Minho.

Lévy, P. (1997) "*Cyberculture*", Paris, Odile Jacob.

Lévy, P. (1994) "*L'intelligence collective. Pour une anthropologie du cyberspace*", Paris, La Découverte.

Lévy, P. (1990) "*Les technologies de l'intelligenceI*", Paris, La Découverte.

Maccormack, C. & Jones, D. (1998) "*Web-based education system*", New York, Wiley Computer Publishing.

Merriam, S. (1998) "*Qualitative research and case studies applications in education: Revised and Expanded from Case Study Research in Education*", San Francisco, Jossey-Bass Publishers.

Paiva, C. (2004), "Vida, trabalho e linguagem na cultura das redes: elementos para uma antropológica do ciberespaço", *Biblioteca online de Ciências da Comunicação*, Retrieved on September 2008 from http://www.bocc.ubi.pt/pag/paiva-claudio-antropologia-ciberespaco.pdf.

Palloff, R., Pratt, K. (2000) "*Building learning communities in cyberspace*", San Francisco, Jossey Bass Inc.

Perona, J., Veloso, M. (2007) "Modalidades educativas de la radio en la era digital", *Icono 14 – Revista de Comunicación Y Nuevas Tecnologías*, Retrieved on April 2008 from http://www.icono14.net/revista/num9/articulos/08.pdf.

Punch, K. (1998) "*Introduction to social research: Quantitative & qualitative approaches*", London, SAGE.

Priestman, C. (2002) "*Web Radio – radio prodution for internet streaming*", Oxford, Focal Press.

Roesler, J. (2007) "*Comunicação, socialidade e educação online*", Retrieved on July 2008 from http://www.abed.org.br/congresso2007/tc/552007104412PM.pdf

Sampaio, R. (2008), "*Educar, ensinar e aprender a distância na era digital: princípios básicos*, Proceedings of the X Simpósio Internacional de Informática Educativa, 03-05 October 2008, Salamanca, pp.145-150.

Silva, B. (2001) "As tecnologias de informação e comunicação nas reformas educativas em Portugal", *Revista Portuguesa de Educação*, XIV (2), pp. 111-153.

Souza, I., Souza, C. (2007), "*O poder do rádio na era da educação à distância*", Retrieved on May from http://www.abed.org.br/congresso2007/tc/53200713528PM.pdf.

Suanno, M. (2003) "*Novas tecnologias de informação: Reflexões a partir da Teoria Vygotskyana*", Proceedings of the I Seminário ABED de Educação à Distância, 12-15 April 2003, Belo Horizonte, pp.1-14.

Stake, R. (1995) "*The art of case study research*", London, Sage.

Tapscott, D., Williams, A. (2008), "*Wikinomics: How mass collaboation changes everything*", New York, Penguin Group.
Trilla, J. (1998) "*Animación sociocultural. Teorias, programas y âmbitos*", Barcelona, Ariel.
Yin, R. (2003) "*Case study research: Design and methods*", London, Sage.